

Filling a Transtank fitted with a Clay and Bailey Overfill Protection Valve

Due to the design limitations of existing mechanical overfill protection valves on the market, Transtank have undertaken to design and manufacture our own valve unit.

There are however many Transtank units currently in operation in the field fitted with the Clay and Bailey branded mechanical overfill protection valve.

In order to assist with the filling of the Transtank unit fitted with the Clay and Bailey valve we have put together the following information bulletin to assist operators of the Transtank unit.

The mechanical overfill protection valve is designed to provide a mechanical shut off to the fill line of the tank, once the safe level of the tank is reached. This valve should only be used as a last measure device. The drop size should be determined by the driver by pre-dipping the tank prior to commencement of the filling process.

The following sticker will be displayed at the fill point should a Clay and Bailey brand valve be fitted.

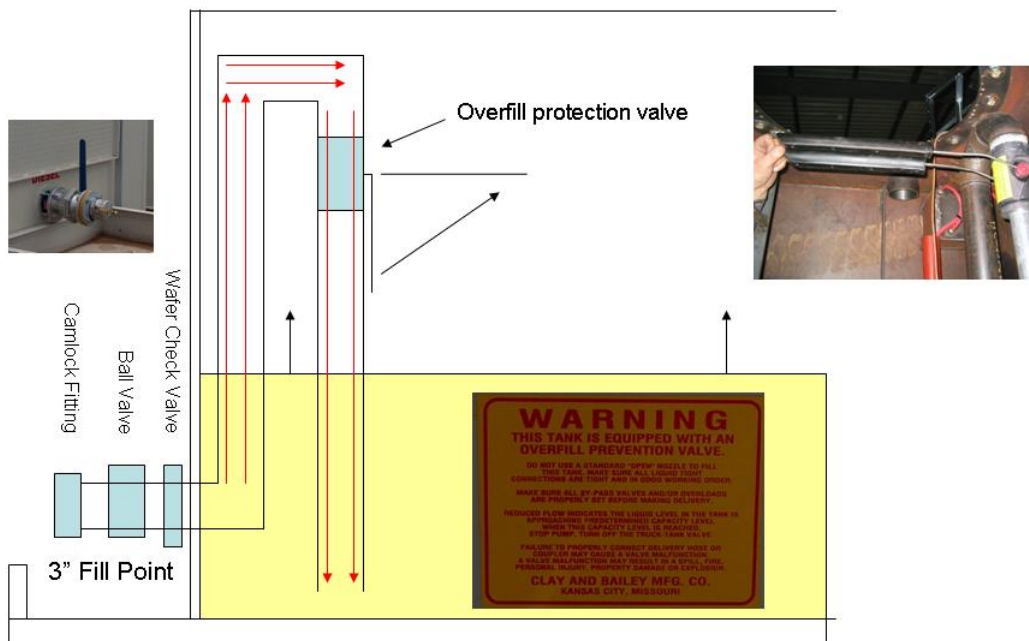


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The filling process of a Transtank unit is as follows:

TRANSTANK LLP

As the tank fills the fluid level rises, lifting the float arm of the overfill protection valve, shutting the valve, and preventing filling past 90% of the tank capacity.



During the filling process, once the tank contents starts to near the safe fill level, the float arm of the overfill protection valve starts to rise. As the float starts to rise, the flow rate through the overfill protection valve commences to be restricted. The degree of restriction to the filling flow rate will increase up to the point of closure of the overfill protection valve.

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The tanker driver will experience a reduction in the pumping flow rate when filling the tank, once the tank nears its safe fill level. Once this flow rate is restricted the driver should reduce the pumping rate when filling that last 2000litres or so.

Continuing to pump at the full rate will cause back pressure in the fill line, and it will appear as though the tank cannot be filled any further.

Should the tanker driver experience a significant reduction in the filling rate of the tank as the contents reaches the safe fill level the driver should stop pumping and allow the contents of the tank to settle for 5 or 10 minutes.

Turbulence is created within the tank as liquid is being pumped into the unit. A slight wave effect can be caused by this filling turbulence. This turbulence can result in the float on the overfill protection valve to flutter as the safe fill level is close to being reached. This fluttering can result in the overfill protection valve to close and open, thus resulting in a further restriction to filling the tank.

By allowing the contents of the tank to settle, this overcomes any potential problem caused by turbulence within the tank.

The tanker pto pump does not have to be run at full speed to ensure a speedy fuel delivery. Increased pressure in the fill tube will only result in problems with filling as the safe fill level is close to being reached. The tanker driver should run the pto pump as slowly as possible during the final stages of the filling process.

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By doing so the tank filling process will be completed without any undue restrictions to the filling speed.

Please note the following images of the Clay and Bailey valve and it's operation.



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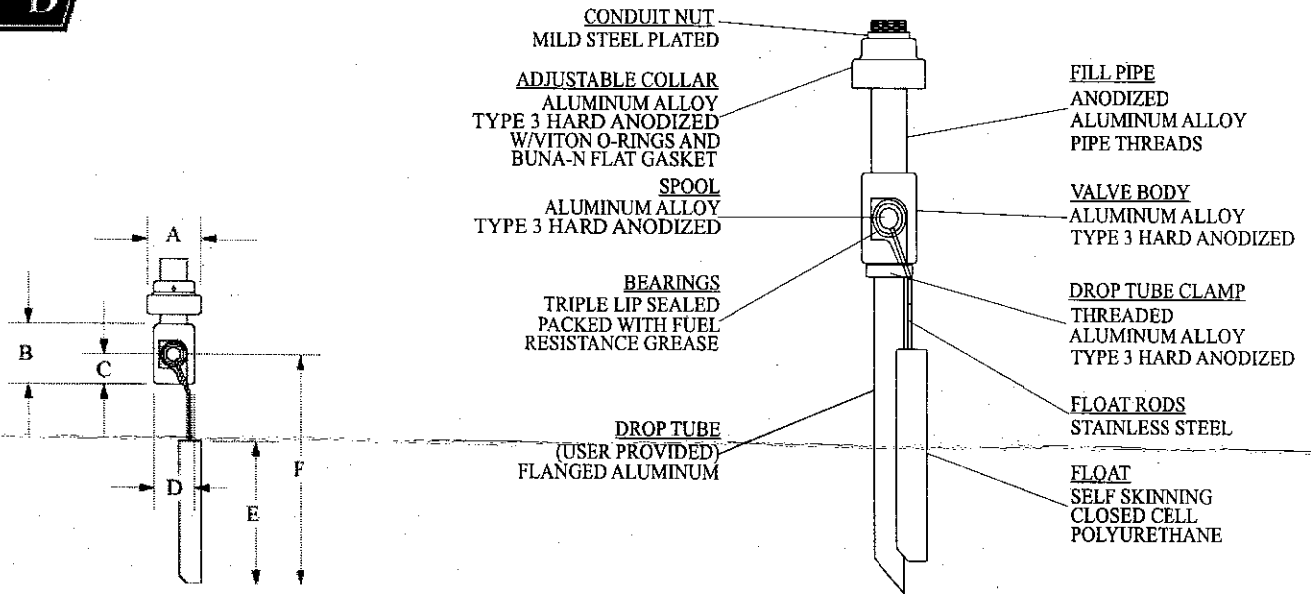
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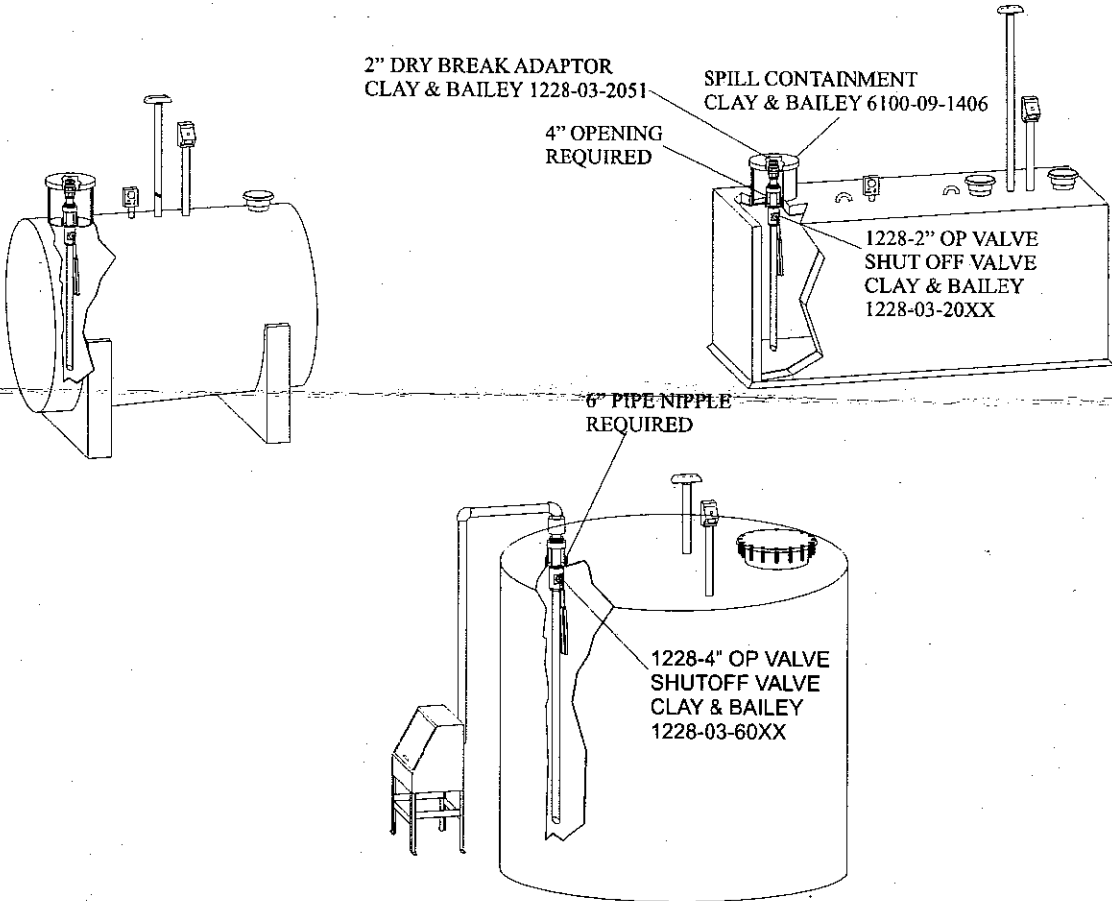
#1228 2" - 3" - 4" Overfill Prevention Valve

Clay & Bailey
6401 E. 40th Street
Kansas City, MO 64129
800-821-6583



	A	B	C	D	E	F
1228-2" OP Valve	5.00"	5.50"	2.75"	3.67"	12.75"	21"
1228-4" OP Valve	7.43"	8.39"	3.75"	5.75"	12.75"	22.85"

1228-3" OP VALVE dimensions are approximately the same as the 1228-2" OP VALVE



Installation:

1. Remove packing while holding the float stable.

CAUTION!

**CARE SHOULD BE TAKEN
WHEN PERFORMING STEP 1 TO PREVENT
DAMAGE TO THE FLOAT**

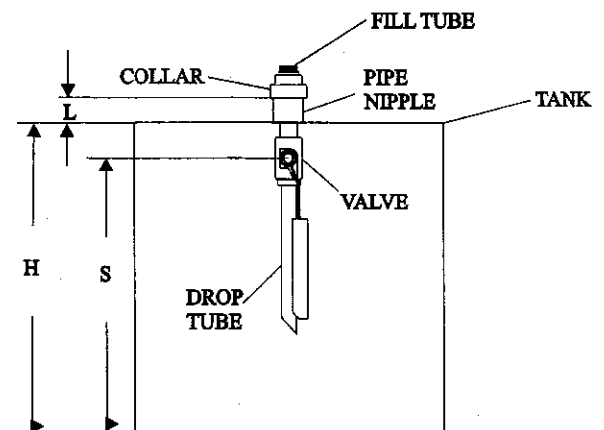
CAUTION!

DO NOT LIFT OR CARRY UNIT BY THE FLOAT

2. Loosen and remove the drop tube clamp from the valve body. Slide the clamp over the bottom of the drop tube with the threaded side facing up. Thread the clamp into the bottom of the valve body and tighten.
3. Using the distance from the top of the riser nipple to the shut off point inside the tank + 2", measure from the valve centerline to a point on the fill tube and mark with a permanent marker. **This does not apply to 3" OP valve!**
4. Make sure the conduit nut is threaded onto the fill pipe, (this prevents accidentally dropping the valve into the tank). Hold the float against the drop tube and insert entire unit, (drop tube first), through the opening into the tank. **This does not apply to the 3" OP valve!**
5. Thread the adjustable collar onto the nipple and tighten hand tight only! Do not use a wrench on any part of the valve body! This will void the warranty. This does not apply to the 3" OP valve.
6. Align the arrow on the fill pipe toward the centerline of the tank and away from walls or other obstructions. **Warning! If the float is not aligned in a direction where it will have free movement from open to close, this device will fail to operate, over filling the tank will result!**
7. Raise or lower the fill pipe until the top of the adjustable collar is aligned with the mark made in step 3. Tighten the setscrews on the adjustable collar. **This does not apply to the 3" OP valve!**
8. Place warning decal, (included with limiter), on the tank where it is readily visible.

ROUND HORIZONTAL TANK HEIGHT	% SHUT-OFF	
	90% HEIGHT	95% HEIGHT
36"	30"	33"
40"	34"	36"
42"	35"	38"
48"	41"	43"
60"	51"	54"
72"	61"	65"
84"	71"	76"
96"	81"	87"
108"	91"	98"
120"	101"	109"

RECTANGULAR TANK HEIGHT	%SHUT-OFF	
	90% HEIGHT	95% HEIGHT
36"	32"	—
40"	36"	—
42"	38"	40"
48"	43"	46"
60"	54"	57"
72"	65"	68"
84"	77"	82"
96"	88"	93"
108"	97"	103"
120"	108"	114"



Operating Procedures:



THE 1228 2", 3", AND 4" OP-SERIES VALVES ARE DESIGNED FOR LIQUID TIGHT FILL OPERATION AND MUST BE USED WITH PROPER CONNECTIONS. FAILURE TO PROPERLY CONNECT AND/OR DISCONNECT THE DELIVERY HOSE WILL RESULT IN AN EXTREMELY DANGEROUS SITUATION!



READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE OPERATING THIS DEVICE.

Before Filling:

1. Insure that the bypass valve on the transport pump is working properly.
2. Do not exceed 100 psig delivery pressure.
3. Inspect delivery hose and fittings for wear and damage.
4. A dry break coupling or cam-lock type coupling is required for delivery.
5. After hooking up the delivery hose, visually inspect the connections.
6. If any leakage is discovered during or after delivery, discontinue use and repair or replace.

Warning Do Not Take the Tank Level by Sticking the Tank Through the Fill Valve!!!

This Could Damage the Valve and Prevent It from Operating Properly!!!

Filling and Disconnection Process:

1. Connect the delivery coupler to the valve fill adaptor.
2. Make sure the nozzle or isolation valve is completely closed.
3. Turn on the pump.
4. Slowly open the nozzle or isolation valve.
5. Monitor the tank liquid level at all times during the fill.
6. Observe delivery hose and connections, and listen to the pump for signs that the valve has closed.
7. When shut off is detected, close the nozzle or isolation valve and shut off the delivery pump.
8. Reopen the nozzle/isolation valve and 5 minutes for the pressure in the line to drop.



ATTEMPTING TO DISCONNECT THE COUPLER WITH PRESSURE IN THE LINE COULD RESULT IN THE RELEASE OF PRODUCT!

9. Close the nozzle/isolation valve and slowly disengage the delivery coupling, replace cap.

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